



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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### **DRAFT Approval for Denver Water to Encapsulate PCB Contaminated Concrete at the Martson Basin #4**

This approval authorizes Denver Water to encapsulate Polychlorinated Biphenyl (PCB) contaminated concrete in twelve expansion joints of Martson Basin #4 (distribution tank/reservoir) and continue operations under certain encapsulation and monitoring procedures for PCBs. The contamination was the result of PCB migration from contaminated caulk in the joints which was removed and disposed of in 2003.

The approval is granted in accordance with the Federal PCB regulations at 40 Code of Federal Regulations (CFR) §761.61(c) *Risk-based disposal approval*. Under the referenced regulations, the United States Environmental Protection Agency (EPA) Regional Administrator may approve a risk-based PCB waste cleanup methodology including encapsulation to allow for continued use of the tank/reservoir if it is found the cleanup method and continued use of the tank/reservoir will not pose an unreasonable risk of injury to health or the environment.

The approval, allowing Denver Water to initiate encapsulation activities is effective immediately. Upon completion of the PCB encapsulation, the tank/reservoir may be operated under conditions set forth in the approval. The approval does not relieve Denver Water from complying with all other applicable federal, state, and local regulations and permits. Departure from the approval conditions without prior written permission may result in the immediate suspension of this approval, the commencement of proceedings to revoke this approval, and/or an enforcement action. In addition, this approval does not preclude EPA from initiating an enforcement action, including seeking civil penalties, for violations of the Toxic Substances Control Act and the Federal PCB regulations.

The Denver Water Marston Basin #13 Encapsulation and Sampling/Monitoring Plan dated December 23, 2004 is incorporated by reference into this approval. Section numbers below are the same as those in the Encapsulation and Sampling/Monitoring Plan.

### **3.0 Encapsulation**

To ensure that encapsulation of the concrete continues to prevent the possibility of migration of PCBs, Denver Water shall apply two or more coats of epoxy coating over each joint after the tank/reservoir has been drained. The coats shall be of contrasting colors so that it will be obvious

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if the outer surface were to wear away. The coating shall be Sikagard 62. Once the two coats are applied and reach appropriate cure times, wipe samples shall be collected at the encapsulant surface of each of the 12 encapsulated joints using the standard wipe test procedure at 40 CFR §761.123. One sample location shall be over the joint and at the location where the concentration of PCBs in the concrete is highest. Random locations shall be selected for wipe sampling along the vertical dimensions of the other 11 joints. All sampling locations shall be recorded. All sampling wipes shall be prepared by the analytical laboratory prior to sampling, and all samples shall be analyzed for PCBs. Quality assurance procedures shall be followed. One blank wipe shall be collected and labeled as sample number 4. Chain-of-custody forms shall be used to track each sample from collection to laboratory, all wipe samples shall be shipped in a cooler with ice, and appropriate custody seals shall be attached to the cooler lid. The samples shall be analyzed for PCBs using EPA Method 8082 with a reporting limit of 0.2 µg/wipe (100 cm<sup>2</sup>).

The hatch entry ways to the tank/reservoir shall be marked with the Large PCB Mark, M<sub>L</sub>, in accordance with 40 CFR §761.30(p).

#### **4.0 Water Sampling**

Denver Water shall use EPA Method 508A to analyze for PCBs in water once encapsulation is complete. The reporting limit shall be 0.25 µg/L. The tank/reservoir shall again be filled with water and allowed to rest undisturbed for 48 hours. One sample shall then be collected from the water column at or near the joint with the highest concentration of PCBs remaining in the concrete and one random sample shall be collected from the water column at or near one of the remaining 11 joints. The samples shall be submitted under chain of custody to the analytical laboratory. The location of the sample along the vertical dimension of the joint along with the distance from the encapsulant surface shall be recorded.

#### **5.0 Verification Protocols**

The verification protocols at Sections 3.0 (before cleaning) and 4.0 shall be repeated once every year. Denver Water shall also collect an annual water sample from the tank/reservoir prior to entering the distribution system and test for PCBs using method 508 to assure compliance with the Safe Drinking Water Act MCL of 0.5 µg/L. EPA reserves the right to obtain duplicate samples upon request.

If PCBs are detected at or above the reporting limits, or if deterioration of the encapsulant is observed, EPA shall be notified by telephone within 24 hours and in writing within five working days. The tank/reservoir shall be immediately taken out of service, and repairs initiated.

#### **6.0 Annual Tank/Reservoir Maintenance**

The tank/reservoir shall be taken out of service annually for maintenance and cleaning. The

maintenance and cleaning consists of draining the tank/reservoir, washing the walls and floors of the reservoir to remove any accumulated sediment from the tank/reservoir, and then inspection to determine if any repairs are needed. Any sediment found shall be sampled prior to cleaning and analyzed for PCBs using EPA Method 8082 with a reporting limit of 0.2 ppm. Once cleaning and repairs are complete, the encapsulant shall be inspected at each of the 12 joints. If any evidence of the base coat epoxy coating color is apparent, fading of the top coat, or any other signs of deterioration are observed, the encapsulant at the joint or joints shall be repaired.

The repairs shall consist of removing and replacing the epoxy coating or recoating the encapsulant with the same color as the original top coat of epoxy coating and allowing the coating to cure properly. A wipe sample shall then be collected at the repair location following the standard wipe test procedures outlined in 40 CFR §761.123 and analyzed by EPA Method 8082 with a reporting limit of 0.2 µg/wipe (100 cm<sup>2</sup>).

The location of each repair, the type of repair, and results of the wipe test shall then be submitted to EPA to document the analytical results and the repair.

## **7.0 End of Tank/Reservoir Life Removal and Disposal Plan**

Once Denver Water has determined the tank/reservoir has served its useful life and the facility can no longer serve as a distribution tank/reservoir, the remaining PCB-containing concrete shall be remediated and disposed of in accordance with the PCB regulations. The contaminated concrete shall be cut out and segregated from the non-contaminated concrete and containerized for transportation and disposal to a TSCA approve disposal facility. All appropriate state and federal laws and regulations shall be followed at the time the remediation takes place.

## **8.0 Annual Reports to EPA**

An annual report shall be submitted to EPA on or before January 31 of each year that shall summarize all activities relating to the encapsulated joints in the tank/reservoir. This shall include the verification protocol results at Section 5.0, all PCB analytical results from water samples and sediment samples, all results from wipe samples taken at joints where a repair has occurred, and copies of the inspection log for that year.

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Date

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Pollution Prevention, Pesticides and Toxics Program

